

USAWC STRATEGY RESEARCH PROJECT

**GENERATING CAPABILITY REQUIREMENTS FOR LAND BORDER  
SECURITY FORCES: APPLYING THE ARMY'S FORCE MANAGEMENT MODEL**

by

Lieutenant Colonel Richard S. Vanderlinden  
United States Army

Colonel George Reed  
Project Advisor

This SRP is submitted in partial fulfillment of the requirements of the Master of Strategic Studies Degree. The U.S. Army War College is accredited by the Commission on Higher Education of the Middle States Association of Colleges and Schools, 3624 Market Street, Philadelphia, PA 19104, (215) 662-5606. The Commission on Higher Education is an institutional accrediting agency recognized by the U.S. Secretary of Education and the Council for Higher Education Accreditation.

The views expressed in this student academic research paper are those of the author and do not reflect the official policy or position of the Department of the Army, Department of Defense, or the U.S. Government.

U.S. Army War College  
CARLISLE BARRACKS, PENNSYLVANIA 17013

## Report Documentation Page

*Form Approved*  
OMB No. 0704-0188

Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

1. REPORT DATE <b>18 MAR 2005</b>	2. REPORT TYPE	3. DATES COVERED -
4. TITLE AND SUBTITLE <b>Generating Capability Requirements for Land Border Security Forces Applying the Army's Force Management Model</b>		
5a. CONTRACT NUMBER		
5b. GRANT NUMBER		
5c. PROGRAM ELEMENT NUMBER		
6. AUTHOR(S) <b>Richard Vanderlinden</b>		
5d. PROJECT NUMBER		
5e. TASK NUMBER		
5f. WORK UNIT NUMBER		
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) <b>U.S. Army War College, Carlisle Barracks, Carlisle, PA, 17013-5050</b>		
8. PERFORMING ORGANIZATION REPORT NUMBER		
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)		
10. SPONSOR/MONITOR'S ACRONYM(S)		
11. SPONSOR/MONITOR'S REPORT NUMBER(S)		
12. DISTRIBUTION/AVAILABILITY STATEMENT <b>Approved for public release; distribution unlimited</b>		
13. SUPPLEMENTARY NOTES		
14. ABSTRACT <b>See attached.</b>		
15. SUBJECT TERMS		
16. SECURITY CLASSIFICATION OF:		
a. REPORT <b>unclassified</b>	b. ABSTRACT <b>unclassified</b>	c. THIS PAGE <b>unclassified</b>
17. LIMITATION OF ABSTRACT		
18. NUMBER OF PAGES <b>32</b>		
19a. NAME OF RESPONSIBLE PERSON		



## ABSTRACT

AUTHOR: Lieutenant Colonel Richard S. Vanderlinden

TITLE: Generating Capability Requirements for Land Border Security Forces: Applying the Army's Force Management Model

FORMAT: Strategy Research Project

DATE: 18 March 2005 PAGES: 32 CLASSIFICATION: Unclassified

This paper will demonstrate how key parts of the Department of the Army's force management process can serve as a model for the Department of Homeland Security to develop new capability requirements (or review existing requirements) needed to execute the land border security mission. The paper begins by examining the pivotal role that the National Strategy for Homeland Security plays in setting the foundation for border security with specific focus toward the threat of terrorism. Next, the paper demonstrates how the Department of Homeland Security can use the Army's methodology for generating requirements as a means of identifying the capabilities needed within their organization to accomplish land border security. By capitalizing on an already proven force generation process, the Department of Homeland Security can make great strides in the identification and pursuit of critical capabilities required for the execution of the nation's land border security mission.



## TABLE OF CONTENTS

ABSTRACT.....	iii
LIST OF ILLUSTRATIONS .....	vii
GENERATING CAPABILITY REQUIREMENTS FOR LAND BORDER SECURITY FORCES: APPLYING THE ARMY'S FORCE MANAGEMENT MODEL .....	1
NATIONAL STRATEGY FOR HOMELAND SECURITY.....	1
STRATEGY IMPLEMENTATION .....	2
ARMY FORCE MANAGEMENT MODEL PROVIDES A BRIDGE.....	2
FUNCTIONAL AREA ANALYSIS.....	5
ROLES AND MISSIONS (STRATEGIC, OPERATIONAL, TACTICAL) .....	7
ANALYTICAL UNDERPINNINGS, EXPERIENCES, STUDIES .....	9
ASSESS THE THREATS .....	10
DEVELOP A TECHNOLOGICAL FORECAST .....	12
IDENTIFY AND VALIDATE THE ENDURING FUNDAMENTAL ASSUMPTIONS .....	13
OPERATIONAL ENVIRONMENT ANALYSIS .....	14
DEVELOP A DRAFT CONCEPT .....	16
FORCE DESIGN PARAMETERS .....	17
DRAFT ORGANIZATION AND OPERATIONAL CONCEPTS.....	18
CONCLUSION .....	18
ENDNOTES .....	19
BIBLIOGRAPHY .....	23



## LIST OF ILLUSTRATIONS

FIGURE 1. ARMY FORCE MANAGEMENT CHART.....	4
FIGURE 2. GENERATE CAPABILITY REQUIREMENTS.....	5
FIGURE 3. FUNCTIONAL AREA ANALYSIS.....	6
FIGURE 4. ROLES AND RESPONSIBILITIES.....	7



## GENERATING CAPABILITY REQUIREMENTS FOR LAND BORDER SECURITY FORCES: APPLYING THE ARMY'S FORCE MANAGEMENT MODEL

The art of war teaches us to rely not on the likelihood of the enemy's not coming, but on our own readiness to receive him; not on the chance of his not attacking, but rather on the fact that we have made our position unassailable.

—Sun Tzu

The September 11, 2001 (9/11), terrorist attacks against the United States launched the nation into a global war on terrorism. This war is being fought on two primary fronts, offensive operations overseas targeting terrorists and defensive operations to protect the homeland. The US effort to protect the homeland is termed Homeland Security. "Homeland security is a concerted national effort to prevent terrorist attacks within the US, reduce America's vulnerability to terrorism and minimize the damage and recovery from attacks."<sup>1</sup>

### **NATIONAL STRATEGY FOR HOMELAND SECURITY**

In the aftermath of the 9/11 attacks, the President of the United States on October 8, 2001, established the Office of Homeland Security and directed it to produce the first National Strategy for Homeland Security.<sup>2</sup> The National Strategy for Homeland Security, published in July 2002, is a hallmark document. At a minimum, the National Strategy for Homeland Security is a beginning for the new and longstanding challenge of protecting America from terrorism. The strategy seeks to rally the nation and establish cooperation among federal, state, local and private sectors. The strategy also addresses six fundamental questions regarding homeland security.<sup>3</sup>

- What is homeland security?
- What missions and tasks fall under homeland security?
- What are the goals and objectives of homeland security?
- What are the roles and responsibilities of the federal government?
- What are the roles and responsibilities of the non-federal government?
- What are the initial priorities for the way ahead?

The National Strategy for Homeland Security marks a significant effort to address antiterrorism at home. However, as with most strategic documents, the devil is in the details. Even a great strategic plan can be destroyed by poor implementation. Successful implementation requires a way to bridge the gap between the overall grand strategy and the

execution of tasks at the lower levels. Fortunately, the Department of Homeland Security understands and acknowledges the importance of implementation and declared the organization will "establish an overarching framework for implementation of their plan as part of a *Future Years Homeland Security Plan*."<sup>4</sup>

The most dangerous strategy is to jump a chasm in two leaps.

—Benjamin Disraeli  
British politician, 1804 - 1881

### **STRATEGY IMPLEMENTATION**

Arguably the hardest part of developing a strategy is not writing the document that communicates the strategic vision, but is the writing of plans and methods for implementing the strategy. In implementing the National Strategy for Homeland Security, execution demands effective and efficient assignment of roles and responsibilities, development or refinement of organizational structure and capabilities, and cooperation among critical players throughout all levels of government and the private sector. To achieve the national strategy a bridge is needed between strategic goals and execution. Part of implementation must include development (or at least a comprehensive review) of the force structure required to conduct the mission of securing America's borders. The development of force structure capability requirements can be a time consuming and complex task. Fortunately for the Department of Homeland Security, they can turn to the Department of Defense for a proven force development model which already exists within the U.S. Army.

### **ARMY FORCE MANAGEMENT MODEL PROVIDES A BRIDGE**

This paper will demonstrate how key parts of the Army's force management process can serve as a model for the Department of Homeland Security to develop new capability requirements (or review existing requirements) needed to execute the land border security mission. The paper begins by examining the pivotal role that the National Strategy for Homeland Security plays in setting the foundation for border security with specific focus toward the threat of terrorism. Next, the paper demonstrates how the Department of Homeland Security can use the Army's methodology for generating requirements as a means of identifying the capabilities needed within their organization to accomplish land border security. By capitalizing on an already proven force generation process, the Department of Homeland Security can make great strides in the identification and pursuit of critical capabilities required for the execution of the nation's land border security mission.

The Army's force management model is a comprehensive set of processes which result in the development of a draft organization and operational concept for a specified mission.<sup>5</sup> Use of the model also results in the identification of specific organizational requirements in terms of doctrine, organizational design, training, materiel requirements, leadership and education, personnel and facilities. These seven key elements, commonly referred to in the Department of Defense as DOTMLPF, are critical to establishing new organizational capabilities. This process is a valuable tool for US Army force developers and the methodology can be adapted to meet the needs of the Department of Homeland Security. The process considers internal and external factors that can influence mission execution. It also encourages creative and critical thinking about the mission and organizational structure in the out years. The nine major process steps, summarized below and depicted in Figure 1, make up the Army force management model.<sup>6</sup>

- Determine strategic and operational requirements
- Generate capability requirements (focus of this paper)
- Design organizations
- Develop organizational models
- Material acquisition management process
- Determine authorizations/resource management
- Document organizational authorizations
- Acquire, train and distribute personnel
- Acquire and distribute material

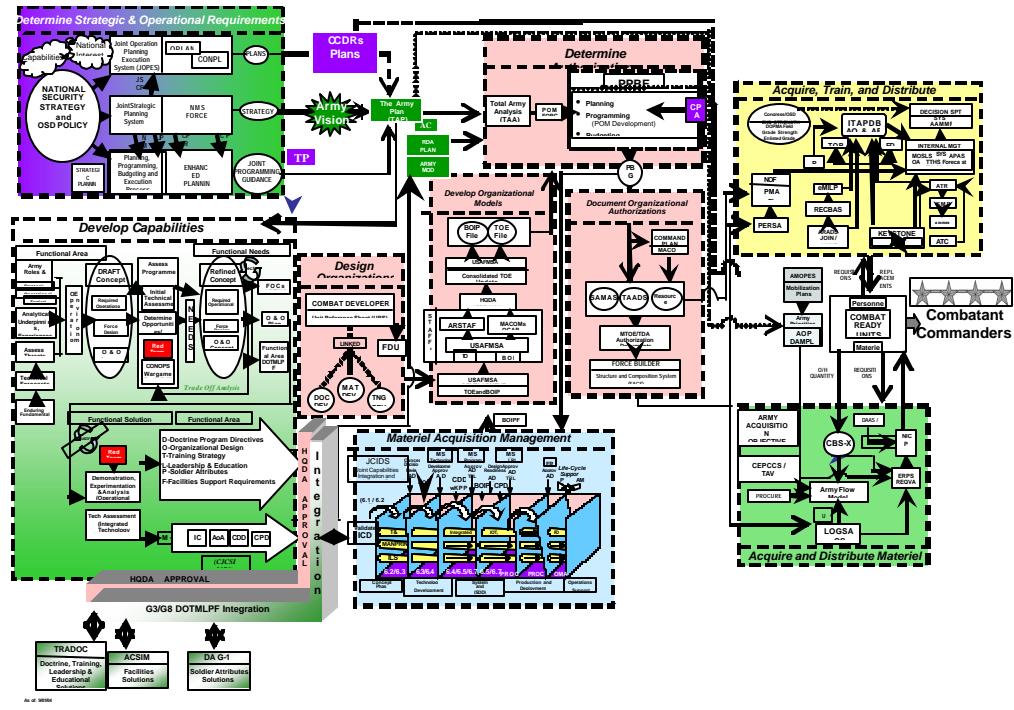


FIGURE 1. ARMY FORCE MANAGEMENT CHART

The end state for the force management process is the design and fielding of units that are organized, trained and equipped to accomplish functionally specific missions based on capabilities. Critical and creative thinking are valued throughout all steps. The overall process is complex, time consuming and demands expertise within various processes to achieve success and meet end state. However, when the individual steps within the model are broken down and accomplished as separate tasks, the model is manageable and logical.

The methodology in this paper involves navigating the first, and arguably the most critical, part of the “Generating Capability Requirements” portion of the Army’s force management model (figure 2).<sup>7</sup> The specific task is to demonstrate how the *Functional Area Analysis* can be used by the Department of Homeland Security to reach a draft organizational and operational capability. The purpose of the functional area analysis is to assess strategy, policy, threat, doctrine and technology associated with the operational environment. The result of the functional area analysis is the development of force capabilities, operational concepts for the force and mission tasks the force must perform under specific conditions.<sup>8</sup>

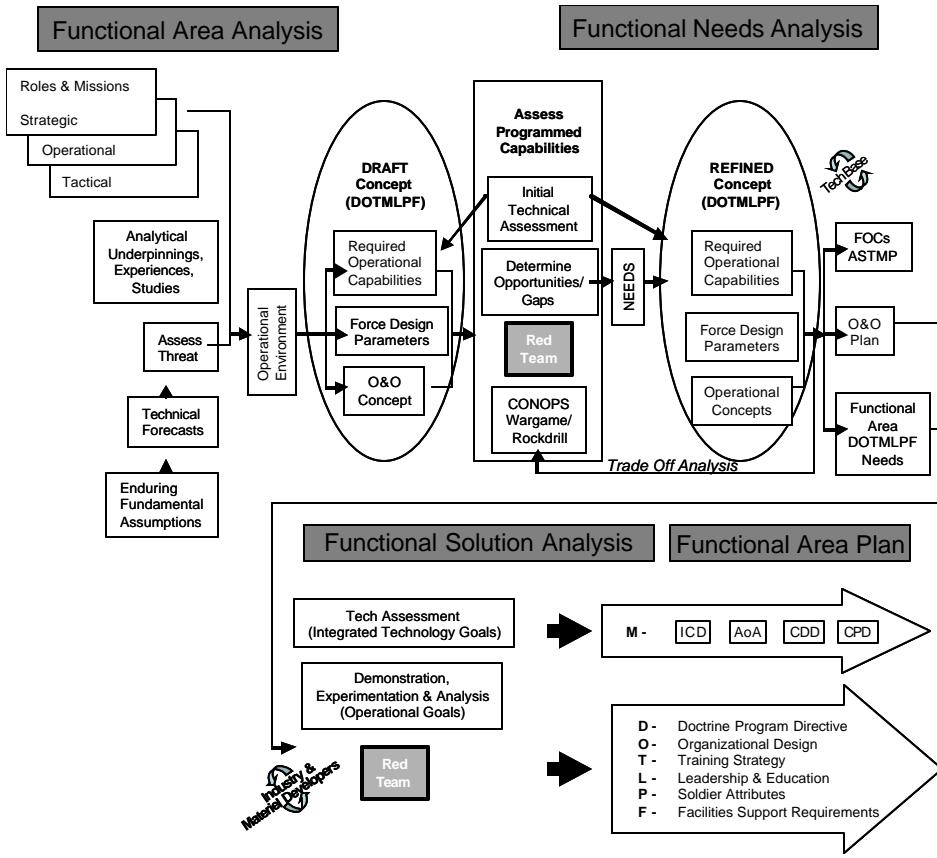


FIGURE 2. GENERATE CAPABILITY REQUIREMENTS

### FUNCTIONAL AREA ANALYSIS

There are nine interrelated elements within the functional area analysis process. These elements are summarized below and shown in Figure 3.<sup>9</sup> The nine parts are discussed in detail throughout the remainder of this paper. The purpose of reviewing these steps is to explain and demonstrate how the Department of Homeland Security can apply this analytical model to develop force capabilities, concepts and tasks specific to land border security within the US.

- Roles and Missions (Strategic, Operational, Tactical)
- Analytical Underpinnings, Experiences, Studies
- Assess the Threats

- Develop a Technological Forecast
- Identify and Validate the Enduring Fundamental Assumptions
- Operational Environment Analysis
- Required Operational Capabilities
- Force Design Parameters – full spectrum dominance
- Draft organization and operational concepts

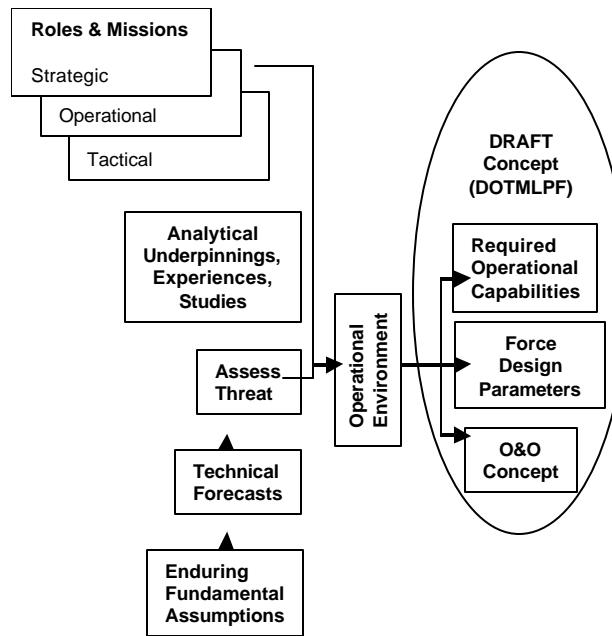


FIGURE 3. FUNCTIONAL AREA ANALYSIS

For ease of understanding, the functional area analysis is explained in this paper as a nine step, sequential process. In reality, the first six steps (roles & missions, analytical underpinning & studies, threats, technology, assumptions, operating environment) can be accomplished in any order or simultaneously. The remaining three steps (capabilities, design and concepts) constitute the draft operational concept and include development of requirements for doctrine, organizational design, training, material, leadership and education, personnel and facilities.

## ROLES AND MISSIONS (STRATEGIC, OPERATIONAL, TACTICAL)

Understanding the various roles and missions associated with land border security is a critical step in the development of organizational capabilities. Although roles and missions are often characterized as three separate and distinct levels (strategic, operational and tactical), in reality the three levels overlap and responsibilities are often clearly delineated. In some instances, a single organization, such as the Central Intelligence Agency, performs functions which span all three levels (figure 4).

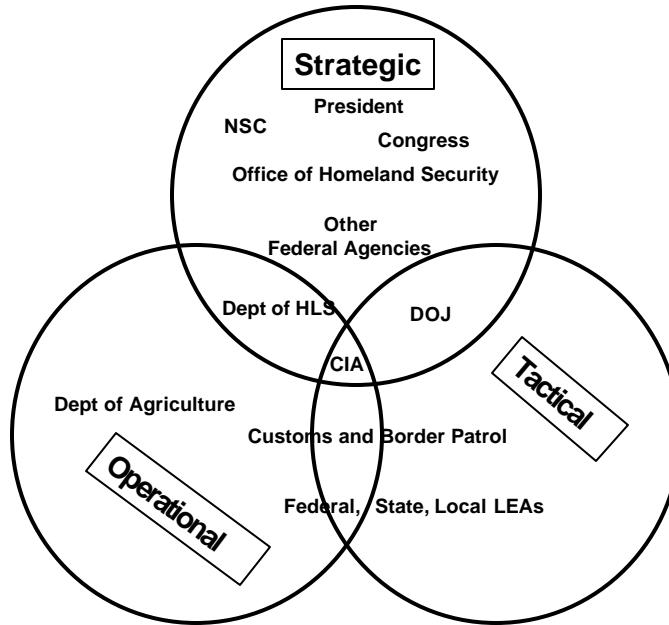


FIGURE 4. ROLES AND RESPONSIBILITIES

It is important during this stage of analysis to identify the key organizational players associated with land border security and their specified roles and missions. Much of the analysis for roles and missions comes directly from national documents or directives such as the National Security Strategy of the United States (September 2002), National Strategy for Homeland Security (July 2002), National Strategy for Combating Terrorism (February 2003), National Strategy to Combat Weapons of Mass Destruction (December 2002) and presidential security directives. Examples of three key presidential security directives which influence roles and missions include:

- Homeland Security Presidential Security Directive-1 (29 August 2001) addresses the organization and operation of the Homeland Security Council
- Homeland Security Presidential Security Directive-2 (30 October 2001) addresses combating terrorism through immigration policies
- Homeland Security Presidential Security Directive-11 (27 August 2004) addresses comprehensive terrorist related screening procedures

As an example of roles and missions at the strategic level, the responsibility for border security is assigned under the Department of Homeland Security. This department is responsible for monitoring all border activity to detect illegal intrusions of people and goods.<sup>10</sup> The US national strategy provides the vision for “a single entity in the Department of Homeland Security to manage who and what enters our homeland in order to prevent the entry of terrorists and the instruments of terror while facilitating the legal flow of people, goods, and services on which our economy depends.”<sup>11</sup> The key strategic objectives in support of this vision include, in order of priority, “prevent terrorist attacks, reduce America’s vulnerability to terrorism, and minimize the damage and recovery from an attack.”<sup>12</sup>

In executing these strategy objectives, the National Strategy for Homeland Security “aligns security functions into six critical mission areas: intelligence and warning, border and transportation security, domestic counterterrorism, protecting critical infrastructure, defending against catastrophic terrorism, and emergency preparedness and response.”<sup>13</sup> The three most important mission areas that support a strong national strategy for securing land borders are intelligence/warning, domestic counterterrorism and border/transportation security. The key task for both intelligence/warning and domestic counterterrorism policy is to detect terrorist activity before an attack. The key task for border and transportation security, as established by the National Strategy for Homeland Security, is to create “smart borders” to facilitate traffic, trade and commerce with Mexico and Canada, while simultaneously ensuring accountability of whom and what is transiting the borders.

Guidance contained in the National Strategy for Homeland Security addresses the roles and missions assigned to the Department of Homeland Security, White House Office of Homeland Security, Department of Defense, and Other Federal Departments and Agencies.<sup>14</sup> The Department of Homeland Security was directed to “bring together 22 entities with critical homeland security missions and establish the nation’s single federal department whose primary mission is to protect our homeland against terrorist threats.”<sup>15</sup> The White House Office of Homeland Security was established to advise the President, coordinate the interagency process

as related to homeland security, and work with the Office of Management and Budget to defend the President's homeland security budget proposals. The Department of Defense is responsible for military missions abroad to reduce terrorist threats, as well as military support to civil authorities in the defense of the homeland.

The roles and missions at the operational level are related to the functions of specific organizations such as Customs Service and Border Patrol, Central Intelligence Agency, Department of Justice and Department of Defense. The roles and missions at this level include providing command and control, departmental policies, training programs, resources and various types of mission support. As an example, the Central Intelligence Agency may have information regarding a specific threat that is suspected to cross the border and would pass that knowledge to the Department of Homeland Security who in turn disseminates the information to Border Patrol agents who can act on the information. This seemingly simple example drives capability requirements designed to receive, analyze, communicate and act on threat information. The effect at the execution end of the chain is the need for the Customs Service and Border Patrol to have a structure to manage threat information (an intelligence office). By identifying the operational level organizations which have specific roles and mission related to border security, the Department of Homeland Security will have a clearer picture of how internal and external agencies drive capability requirements for land border security.

The roles and missions for land border security at the tactical level involve primarily law enforcement and security forces who operate the nation's borders. A large number of organizations are involved at this level and the burden of responsibility is shared across federal, state, county and local agencies. Other organizations involved at the tactical level may include private security corporations, contractors and support agencies. However, the agency overall responsible for land border security in the US is the Customs Service and Border Patrol. Therefore, the concepts in this paper are intended to identify the capabilities needed for the Customs Service and Border Patrol to perform its mission of securing our land borders. One of the benefits of conducting a capabilities based analysis following the Army's model is the fact that the Customs Service and Border Patrol have been performing the border security mission since 1904.<sup>16</sup> As such, much of the information and analytical rigor which could benefit this process is available for examination.

#### **ANALYTICAL UNDERPINNINGS, EXPERIENCES, STUDIES**

The purpose of reviewing analytical underpinnings, experiences and studies in the functional area analysis is to benefit from what the Department of Homeland Security already

knows about its assigned mission of border security. A large volume of independent research, congressional testimony, General Accounting Office formal reports and customs and immigration experience is available to assist in framing the major issues associated with border security. Additional studies and analysis may be necessary to fully examine all aspects of identifying capability requirements. As a first step, the Department of Homeland Security should maximize use of the lessons learned from the Customs Service and Border Patrol's 100 years of experience and those of other supporting agencies. The lessons are undoubtedly useful in characterizing the threat, establishing the operating environment, creating new organizational concepts and forecasting technology solutions to existing challenges. A review of literature should also reveal how the Customs and Border Patrol is currently organized, trained and equipped to meet its mission. A review of General Accounting Office, and other official documents, should prove valuable in creating a clear picture of the strategic operating environment.

As an example, Congressman Souder, in recent testimony before the Committee on Infrastructure and Border Security, remarked that most foreign nationals crossing the borders are not caught.<sup>17</sup> In separate testimony, Chairman John McCain during the Committee on Senate Commerce, Science and Transportation remarked, "we do not have sufficient control of our border."<sup>18</sup> In view of these comments, it appears the current US strategy accepts a great deal of risk along the border. These examples reveal the role in which strategic risk assessment plays in our strategy for land border security. The degree of risk acceptance at the national level contributes directly to the capabilities required for mission execution.

All of this information is important to the overall analysis effort. However, the Department of Homeland Security should be cautious about how they use the information. The purpose of this stage of analysis is to determine what is known about the mission of border security and what is not known. Information revealed, as well as information gaps, should be helpful later in framing concepts for specific capability requirements.

For the first time, we will identify and assess threats to the homeland, map those threats against vulnerabilities we see in critical infrastructure, issue warnings to the states and localities and organize protective measures.<sup>19</sup>

—Secretary Tom Ridge

### **ASSESS THE THREATS**

There are numerous complex questions that must be answered to develop a comprehensive estimate of the threat and the way ahead to mitigate the threat. The process of

developing a postulated threat assessment is vital to the development of the capabilities to counter that threat. As such, the Department of Homeland Security should spend a great deal of time on this critical step in the functional area analysis. In fact, how the threat may evolve over time plays a critical role in how the organization responds with capabilities to counter the threat. The focus of the Department itself must evolve and focus more on how to defeat the enemy's capabilities rather than who the enemy is and where the enemy may threaten the US.

Historically, the US has "relied heavily on two vast oceans and two friendly neighbors for border security."<sup>20</sup> As such, the US land borders today are relatively vast unpopulated and uncontrolled areas that present a significant vulnerability to terrorism.<sup>21</sup> Terrorists have demonstrated their intent and willingness to attack America, and land borders present a weakness that terrorists can exploit to gain access to valuable targets on American soil.

The attacks of September 11, 2001 established transnational terrorism as a threat which must be addressed within the scope of a national strategy for Homeland Security. Since 9/11, researchers estimate thousands of Middle Easterners, and hundreds of thousands of other nationals, have crossed the southwest border undetected.<sup>22</sup> In 1991, would be terrorist, Ahmed Ressam was caught crossing the Canadian border with a truck load of explosives with plans to conduct bombings in Los Angeles during the millennium celebration.<sup>23</sup> The security enhancements at the nation's airports, seaports and official land crossing points following the attacks of 9/11 will certainly cause terrorists to reevaluate US security strengths and weaknesses. However, it is reasonable to assume that a terrorist group which is well trained, patient and committed to attacking America at home will identify the weaknesses along US borders and exploit those weaknesses.

The US is clearly vulnerable to illegal entry along porous land borders. Eighty-five percent of all traffic entering the US passes through the country's land borders. Each year, the US admits 500 million people, including 350 million non-citizens.<sup>24</sup> The number of illegal entrants caught each year exceeds one million and estimates of the number that enter undetected are as high as three million.<sup>25</sup> The US border with Canada is 5,525 miles long, has 135 official crossing points and is largely undefended.<sup>26</sup> The US border with Mexico, also undefended, is 1,989 miles long and includes only 45 official crossing points.<sup>27</sup> In 2001, the Border Patrol apprehended over 12,000 on the northern border and over one million along the southern border.<sup>28</sup> These statistics provide a staggering and stark reality of the serious nature of border security, and prospects of future threats, in a post-9/11 security environment.

The nation continues to receive intelligence that terrorists intend to strike again on American soil.<sup>29</sup> Furthermore, "the threat of terrorists acquiring and using weapons of mass

destruction is a clear and present danger.”<sup>30</sup> The question commonly asked by Department of Defense antiterrorism experts is one of WHEN will the next attack occur--not IF. As such, it is the responsibility of the national leaders (President and Congress) to take all reasonable actions to prevent these attacks from occurring. Standing “on point” for the nation is the Department of Homeland Security and the US Customs Service and Border Patrol.

## **DEVELOP A TECHNOLOGICAL FORECAST**

Investment in revolutionary capabilities with high payoff potential will yield solutions that can be fielded to enhance our safety and security.<sup>31</sup>

—Homeland Security Strategic Plan

The functional area analysis process benefits greatly by including a current technology assessment (what's available) and the development of a technology forecast (what's possible in the future). The Department of Homeland Security recognizes technology as a force multiplier. The research, development and acquisition of future technologies put solutions in the hands of the operators, thereby increasing their capabilities. During the functional area analysis process, the Department of Homeland Security would need to examine the role of technology and identify technology weaknesses or shortfalls. It is possible that the department may realize the centerpiece of land border security revolves around what the Department of Defense terms C4ISR (command, control, communications, computers, information/intelligence, surveillance and reconnaissance). Regardless, the various tasks which technology support must be addressed in detail. What's important at this stage of the analysis is to compare known capability shortfalls to technology solutions which can enhance capabilities. Known shortfalls may be derived from other process steps in the areas of analytical underpinnings, experiences or studies (from the development of threat assessments or postulated threat) or from efforts to define the operating environment.

The Department of Homeland Security recognizes the value of leveraging technology. As an example of such recognition, note that the department has its own Science and Technology Directorate. This directorate is chartered to work with industry to identify areas for increased research for future technology solutions.<sup>32</sup> The Department of Homeland Security is harnessing the nation's scientific knowledge and technological expertise to protect America and our way of life from terrorism. The Department's Science and Technology Directorate is engaging the academic community to create learning and research environments in areas critical to Homeland Security. Through the Homeland Security Centers of Excellence program, the

department is investing in university-based partnerships to develop centers of multi-disciplinary research where important fields of inquiry can be analyzed and best practices developed, debated, and shared.<sup>33</sup> The Homeland Security Centers of Excellence bring together the nation's experts and focus its most talented researchers on a variety of threats that include agricultural, chemical, biological, nuclear, radiological, high yield explosives and cyber terrorism.

In addition, the Department of Homeland Security works closely with The Combating Terrorism Technical Support Working Group (TSWG), to ensure it stays on the cutting edge. The TSWG is the US national forum that "identifies, prioritizes, and coordinates interagency and international research and development (R&D) requirements for combating terrorism. The TSWG rapidly develops technologies and equipment to meet the high priority needs of the combating terrorism community, and addresses joint international operational requirements through cooperative R&D with major allies."<sup>34</sup>

The Department of Homeland Security should invest time, critical and creative thinking, and leverage partnerships with industry to identify a complete list of technologies for exploitation. Examples of technologies for possible use in border security may include:

- Long range communications (cellular, FM, AM, satellite)
- Satellite imagery (dedicated and responsive)
- All terrain vehicles for isolated locations (increased range and mobility)
- Light aircraft (fixed and rotary wing)
- Force tracking (threat tag and track as well as friendly forces tracking)
- Non-lethal weapons
- Portable personnel and vehicle identification systems (link to immigration and national criminal data bases)
- Optics (day and night observation capabilities to include thermal imagery)
- Portable detectors (CBRNE--chemical, biological, radiological, nuclear, high explosive)
- Unmanned aerial vehicles (video and CBRNE detection capable)

#### **IDENTIFY AND VALIDATE THE ENDURING FUNDAMENTAL ASSUMPTIONS**

The identification and validation of fundamental assumptions is critical to the planning, force generation and execution process. The assumptions, if valid, will assist the Department of Homeland Security by providing focus to the process of generating capability requirements.

Equally important, valid assumptions can help prevent the organization from wasting valuable time and energy. Examples of assumptions the department may want to consider include: Terrorists will continue to target US interests to include attacks on US soil.

- Terrorist groups and lone wolf attackers will attempt to exploit US land border weaknesses in order to gain entry into the US with weapons of mass destruction.
- US military will continue to augment Federal law enforcement agencies with technical expertise, equipment and training, to counter the threat of illegal immigrants and criminals (including terrorists) crossing our borders. Use of the US military as the primary organization responsible to secure land borders will be a last resort.
- The Department of Homeland Security's total operating authority will remain ... (constant, increase, decrease, etc.). This budgetary assumption, however written, is extremely important because much of what the organization can reasonably expect to accomplish is directly tied to the amount of funding available.

## **OPERATIONAL ENVIRONMENT ANALYSIS**

The significant findings, as well as the general information, from the five specific areas we just reviewed (roles and missions; analytical underpinnings, experiences, studies; threat assessment; technology forecast; assumptions) are combined to develop a picture of the future operational environment. The future operational environment describes the physical, demographic, political, economic and technological conditions in which the Customs Service and Border Patrol will operate over the next two decades.<sup>35</sup>

Many issues and challenges complicate the US strategy for defense of land borders. Three factors which have significant impact on a strategy to defend the borders include: national desire to maintain an "open society," political pressure to ignore illegal entries from Mexico because of the benefits of a substantial migrant labor force, and the economic benefits of free trade with Mexico and Canada. "Open borders" is commensurate with a view that "our society must be open to people, ideas, and goods from across the globe."<sup>36</sup> In terms of economic trade, "89% of Mexican exports go to the US and 73% of imports are from the United States. For Canada, 86% of exports go to the US and 76% of imports come from the United States."<sup>37</sup> These benefits are the result of cooperative relations between the US, Canada, and Mexico and are directly attributed to the North American Free Trade Agreement (NAFTA). "Since NAFTA's implementation, trade between the United States and Mexico has more than doubled, growing from \$100 billion in 1994 to \$248 billion in 2000. Enhanced trade has

increased the number of northbound crossings from 2.7 million in fiscal year 1994 to more than 4.3 million in fiscal year 2001.<sup>38</sup>

Other challenges associated with protecting borders include management of illegal immigrants, balance of security priorities, and intelligence sharing with neighbors. The lack of a suitable approach to mitigate the flood of illegal immigrants presents the ideal opportunity for exploitation by terrorists. Terrorists will undoubtedly seek to exploit this weakness. In contrast, the nation's approach to how and what it protects (or doesn't protect) along the border may be out of balance. Since 9/11 the US has substantially increased the resources allocated to protect airports, seaports and border crossing sites. However, with just 10,000 Border Patrol agents conducting 24 hour a day, seven day a week security across a 6,000 plus mile border, T.J. Bonner, President of the National Border Council, would argue the nation has not provided adequate resources to secure porous land borders.<sup>39</sup>

I think in certain areas they can be useful tools, but I do not think that you replace hands with electronic eyes and ears because ultimately it is those hands that apprehend people. To the extent, for example, in the president's request for the upcoming fiscal budget, they want to reallocate a total of about \$75 million out of the budget for sensors and unmanned aerial vehicles. I think it is a mistake to take away from the ability to outfit the troops on the border and to staff the border, because at the same time they are calling for reductions in the number of border patrol agents.<sup>40</sup>

—T.J. Bonner  
President of the National Border Council  
[Response when asked about developing new technologies  
and the help, or lack of help, they may give at the border]

Simply stated, the country has addressed some of the most pressing vulnerabilities at ports of entry (air, sea and land), while failing to address other areas of equal or higher risk across the entire length of the border. In terms of national intelligence, cooperation with Mexico and Canada does not support rapid and timely exchange of information on individuals who pose a threat.<sup>41</sup> Further complicating the matter is the fact that the three countries (US, Canada and Mexico) have significantly different visa and immigration policies which hinder efficient and effective passage of individuals across international borders.

Admittedly there has been good progress to enhance security and address the threat of terrorism at the borders. However, much more progress is required. It is the responsibility of the Department of Homeland Security to address these issues. Since 9/11 the US has worked hard and continuously with Mexico and Canada to improve security along borders and mitigate known weaknesses. The primary initiative on both borders is to develop "smart borders." The

economic security of the US depends on the efficient flow of people, goods, and services. The development of “smart borders” is intended to achieve these goals. Smart borders will include advanced risk-management systems, increased biometric identification and processes to allow pre-cleared goods and persons to cross borders without delay.<sup>42</sup> Smart border technology is also intended to extend the reach of border patrol agents through the use of unmanned aerial vehicles, remote cameras, sensors, aircraft and helicopters. In short, the intent is to maximize technology solutions to facilitate mass transit while simultaneously enhancing security. Mexico has a 22 step plan to develop smart borders.<sup>43</sup> Canada has their own 30 step plan to develop smart borders.<sup>44</sup> The goal of both countries’ is to ensure the speed and control of the flow of goods. However, both of these plans are directed at security and speed of transit at official border crossing sites. Neither plan is intended to address the broader issue of how to approach security along the entire length of the border. Progress has been made in increasing the number of agents patrolling the borders. Currently there are roughly 1,000 border patrol agents on the northern border with Canada and 9,000 agents on the southwest border with Mexico.<sup>45</sup> The current manning level equates to a mere 1.3 agents per mile of land border- - a level that may be understaffed in comparison to the volume of illegal crossings. As such, increasing border patrol agents is a possible concern to address during the force generating process.

### **DEVELOP A DRAFT CONCEPT**

As mentioned earlier in this paper, the future operational environment defines the physical, demographic, political, economic and technological conditions in which the Customs Service and Border Patrol will operate. Based on how the future environment is defined, the Department of Homeland Security must develop a capstone concept which includes the required operational capabilities, the force design parameters and the organizational and operational concepts. These concepts take into consideration the knowledge and information developed during the previous steps within the functional area analysis. The capstone concepts create a mental picture of the future land border security force. The U.S. Army’s force management approach for accomplishing this important task is to create the framework of seven key elements: doctrine, organizational design, training, materiel, leadership and education, personnel and facilities (DOTMLPF). At this stage of the generating capabilities the Department is developing initial concepts of how to address land border security from each of the DOTMLPF functions. The purpose of this portion of the analysis is to envision how, using specific capabilities (some already in use and others which must be developed), the mission of conducting border security could be accomplished.

Required Operational Capabilities describes how the force will organize, plan, prepare and conduct border security operations to include the essential characteristics of the force. The following characteristics are suggestions of capabilities the Department of Homeland Security may desire in a future force designed to execute land border security.

- Capability to operate networked and decentralized
- Capability to detect, see and assess suspected illegal border crossings with technology before responding with manpower
- Capability to respond to multiple locations, simultaneously, by land and air
- Capability to track and communicate with parent organization forces
- Capability to track and communicate with force enablers (land and air)
- Capability to integrate global positioning, imagery and reconnaissance data
- Capability to integrate sensors and detectors to assess vehicles, personnel and packages/containers for chemical, biological, radiological and explosive material
- Capability to connect with immigration and criminal information data bases for individual identification and threat information
- Capability to report and pass critical, time sensitive information from isolated locations
- Capability to employ both lethal and non-lethal force
- Capability to base security forces where they will be postured to respond to mission requirements, as well as have the support facilities, structure and command and control

Each capability must be assessed in terms of which elements will be affected within the realm of the DOTMLPF process. For instance, when developing a capability to operate a networked and decentralized organization the Department of Homeland Security must draft concepts on how doctrine, organizational, training, material, leadership, personnel and facilities will support this capability.

#### **FORCE DESIGN PARAMETERS**

Force design parameters provide a guiding vision, from a grand strategic perspective, and establish the foundation from which all capabilities support. From a Department of Homeland Security perspective, design parameters for land border security capabilities may include principles such as economy of force operations (given 6000 miles of border with Canada and

Mexico) and a lightweight, mobile force able to operate from land and air. Decentralized, network centric operations seem critical given the sheer scope of the border security mission. These, and other, overarching concepts are intended to guide the development of capabilities along the same or parallel axis. These concepts might be characterized as providing unity of design.

#### **DRAFT ORGANIZATION AND OPERATIONAL CONCEPTS**

Given the results of all previous steps, the Department of Homeland Security could conclude the functional area analysis by describing in detail what they envision in terms of the organizational design, how the force will operate, and what attributes are most critical to mission success. These concepts would include conclusions about the size of the force, command and control structure, facilities to support mission execution, training programs, material (including advanced future technology required) and the manner in which the force will accomplish its assigned missions. All aspects of the organization and operation would be described in order to create a blueprint image of how the land border security force will be organized, trained and equipped. This draft organization and operational concept would be tested, validated and resourced before design begins.

#### **CONCLUSION**

Strategy drives requirements generation. But, a grand strategic plan can falter without an effective implementation plan. Successful implementation requires a way to bridge the gap between the overall strategy and the execution. By following the US Army's force management process, the Department of Homeland Security can take a solid strategy for homeland security and ensure the capabilities required for executing that strategy are fully realized, resourced and developed. Without a process for envisioning and developing future force capabilities the Department of Homeland Security accepts a great deal of risk in assuming the forces executing land border security today, are properly designed and structured to accomplish their mission into the future.

WORD COUNT=5,818

## ENDNOTES

<sup>1</sup> Office of Homeland Security, *National Strategy for Homeland Security* (Washington, D.C.: U.S. Government Printing Office, July 2002), 2.

<sup>2</sup> *Ibid.*, iii.

<sup>3</sup> *Ibid.*, iv.

<sup>4</sup> Office of Homeland Security, *Securing Our Homeland, U.S. Department of Homeland Security Strategic Plan* (Washington, D.C.: U.S. Government Printing Office, 2004), 54.

<sup>5</sup> United States Army War College, *How the Army Runs, A Senior Leader Reference Handbook* (Carlisle, PA, 2004), figure 2-2.

<sup>6</sup> *Ibid.*

<sup>7</sup> United States Army War College, *How the Army Runs, A Senior Leader Reference Handbook* (Carlisle, PA, 2004), 45.

<sup>8</sup> *Ibid.*

<sup>9</sup> *Ibid.*

<sup>10</sup> Office of Homeland Security, *National Strategy for Homeland Security* (Washington, D.C.: U.S. Government Printing Office, July 2002), 22.

<sup>11</sup> *Ibid.*

<sup>12</sup> Office of Homeland Security, *National Strategy for Homeland Security* (Washington, D.C.: U.S. Government Printing Office, July 2002), vii.

<sup>13</sup> *Ibid.*, viii.

<sup>14</sup> *Ibid.*, 13.

<sup>15</sup> *Ibid.*

<sup>16</sup> Customs and Border Patrol website, accessed, 4 Dec 04, [http://U\\_S\\_Border\\_Patrol\\_History - CBP\\_gov.htm](http://U_S_Border_Patrol_History - CBP_gov.htm).

<sup>17</sup> Congress. Senate. *Subcommittee on Infrastructure and Border Security. U.S. Representative Dave Camp (R-MI) Holds a Hearing on Border Security*, June 15, 2004, p9 (18010 words) [data base on-line]; available from Lexis-Nexis. Accessed 6 October 04.

<sup>18</sup> Congress. Senate. *Committee on Commerce, Science, and Transportation. Border Security Measures*, 17 June 2004, p.1 (711 words) [data base on-line]; available from Lexis-Nexis. Accessed 6 October 2004.

<sup>19</sup> Office of Homeland Security, *Securing Our Homeland, U.S. Department of Homeland Security Strategic Plan* (Washington, D.C.: U.S. Government Printing Office, 2004), 31

<sup>20</sup> Office of Homeland Security, *National Strategy for Homeland Security* (Washington, D.C.: U.S. Government Printing Office, July 2002), viii.

<sup>21</sup> Congress. Senate. *Committee on Commerce, Science, and Transportation. Border Security Measures*, 17 June 2004, p.1 (711 words) [data base on-line]; available from Lexis-Nexis. Accessed 6 October 2004.

<sup>22</sup> Michelle Malkin, *Invasion: How America Still Welcomes Terrorists, Criminals, and Other Foreign Menaces to Our Shores* (Washington, D.C.: Regnery Publishing, Inc., 2002), 60.

<sup>23</sup> Norris Smith and Lynn M. Messina, *Homeland Security* (Boston, MA: H.W. Wilson Co, 2004), 110.

<sup>24</sup> Bradley J. Condon and Tapen Sinha, *Drawing Lines in Sand and Snow, Border Security and North American Economic Integration* (London, UK: M.E. Sharpe, 2003), 67.

<sup>25</sup> Ibid., 67.

<sup>26</sup> Frank J. Cilluffo, Terrorism and the Canada – U.S. Border, *Policy Research* (Winter 2001): 105.

<sup>27</sup> Office of Homeland Security, *National Strategy for Homeland Security* (Washington, D.C.: U.S. Government Printing Office, July 2002), 21.

<sup>28</sup> Congress. Senate. *Panel II of the Tenth Hearing of the National Commission on Terrorist Attacks Upon the United States. Law Enforcement and the Intelligence Community*, April 14, 2004, p. 5 (16080 words) [database on-line]; available from Lexis-Nexis. Accessed 6 October 04.

<sup>29</sup> Ibid.

<sup>30</sup> Executive Office of the President. *National Strategy for Combating Terrorism* (Washington, D.C.: The White House, February 2003), 10.

<sup>31</sup> Office of Homeland Security, *Securing Our Homeland, U.S. Department of Homeland Security Strategic Plan* (Washington, D.C.: U.S. Government Printing Office, 2004), 53.

<sup>32</sup> Department of Homeland Security Web Site, *Research and Technology Fact Sheet*, available from <<http://www.dhs.gov/dhspublic/display?theme=27&content=3856>>; Internet; accessed 20 November 2004.

<sup>33</sup> Ibid.

<sup>34</sup> Technical Security Working Group web site, *Research and Development Fact Sheet*, available from <<http://www.tswg.gov/tswg/home/home.htm>>; Internet; accessed 20 November 2004.

<sup>35</sup> United States Army War College, *How the Army Runs, A Senior Leader Reference Handbook* (Carlisle, PA, 2004), 44.

<sup>36</sup> Executive Office of the President. *The National Security Strategy of the United States of America* (Washington, D.C.: The White House, September 2002), 31.

<sup>37</sup> Condon and Sinha, 13.

<sup>38</sup> General Accounting Office. *North American Free Trade Agreement, Coordinated Operational Plan Needed to Ensure Mexican Trucks' Compliance with U.S. Standards*, December 2001. Available from <[http://ntl.bts.gov/card\\_view.cfm?docid=12039](http://ntl.bts.gov/card_view.cfm?docid=12039)>; Internet; accessed, September 17, 2004.

<sup>39</sup> Congress. Senate. *Subcommittee on Infrastructure and Border Security. U.S. Representative Dave Camp (R-MI) Holds a Hearing on Border Security*, June 15, 2004, p.23 (18010 words) [data base on-line]; available from Lexis-Nexis. Accessed 6 October 04.

<sup>40</sup> Congress. Senate. *Subcommittee on Infrastructure and Border Security. U.S. Representative Dave Camp (R-MI) Holds a Hearing on Border Security*, June 15, 2004, p.25 (18010 words) [data base on-line]; available from Lexis-Nexis. Accessed 6 October 04

<sup>41</sup> Cilluffo, 109.

<sup>42</sup> Office of Homeland Security, *National Strategy for Homeland Security* (Washington, D.C.: U.S. Government Printing Office, July 2002), 68.

<sup>43</sup> Office of the White House, Office of the Press Secretary. *Smart Border: 22 Point Agreement*. No date; available from <<http://www.whitehouse.gov/infocus/usmxborder/22points.html>>; Internet; accessed September 7, 2004.

<sup>44</sup> Office of the White House, Office of the Press Secretary. *U.S. – Canada Smart Border/30 Point Action Plan Update*. December 6, 2002; available from <<http://www.state.gov/p/wha/rls/fs/18128.htm>>; Internet; accessed September 7, 2004.

<sup>45</sup> Condon and Sinha, 16.



## BIBLIOGRAPHY

Cilluffo, Frank J. Terrorism and the Canada – U.S. Border. *Policy Research* (Winter 2001): 105.

Condon, Bradley J., and Tapen Sinha. *Drawing Lines in Sand and Snow, Border Security and North American Economic Integration*. London, UK: M.E. Sharpe, 2003.

Malkin, Michelle. *Invasion: How America Still Welcomes Terrorists, Criminals, and Other Foreign Menaces to Our Shores*. Washington, D.C.: Regnery Publishing, Inc., 2002.

White House Press Secretary. *Securing America's Borders Fact Sheet: Border Security, Action Plan for Securing a Smart Border*. 25 January 2002. Available from <<http://www.whitehouse.gov/news/releases/2002/01/20020125.html>>. Internet. Accessed 7 September 2004.

Office of the White House Press Secretary. *Smart Border: 22 Point Agreement*. Available from <<http://www.whitehouse.gov/infocus/usmxborder/22points.html>>. Internet. Accessed 7 September 2004.

Office of the White House Press Secretary. *U.S. – Canada Smart Border/30 Point Action Plan Update*. 6 December 2002. Available from <<http://www.state.gov/p/wha/rls/fs/18128.htm>>. Internet. Accessed 7 September 2004.

Smith, Norris, and Lynn M. Messina. *Homeland Security*. Boston, MA: H.W. Wilson Co., 2004.

Technical Security Working Group web site. *Research and Development Fact Sheet*. Available from <<http://www.tswg.gov/tswg/home/home.htm>>. Internet. Accessed 20 November 2004.

U.S. Army War College. *How the Army Runs, A Senior Leader Reference Handbook*. Carlisle, PA: U.S. Army War College, 2003-2004.

U.S. Congress. Senate. *Panel II of the Tenth Hearing of the National Commission on Terrorist Attacks upon the United States*. Law Enforcement and the Intelligence Community, 14 April 2004 (16080 words). Database on-line. Available from Lexis-Nexis. Accessed 6 October 2004.

U.S. Congress. *National Commission on Terrorist Attacks Upon the United States. The 9/11 Commission Report, Final Report of the National Commission on Terrorist Attacks Upon the United States*. Washington, D.C.: 2004.

U.S. Congress. Senate. *Committee on Commerce, Science, and Transportation. Border Security Measures*, 17 June 2004 (711 words). Database on-line. Available from Lexis-Nexis. Accessed 6 October 2004.

U.S. Congress. Senate. *Subcommittee on Infrastructure and Border Security. U.S. Representative Dave Camp (R-MI) Holds a Hearing on Border Security*, 15 June 2004 (18010 words). Database on-line. Available from Lexis-Nexis. Accessed 6 October 2004.

U.S. Customs and Border Patrol web site. Available from <[http://U\\_S\\_Border\\_Patrol\\_History-CBP\\_gov.htm](http://U_S_Border_Patrol_History-CBP_gov.htm)>. Internet. Accessed 4 December 2004.

U.S. Department of Homeland Security. *Securing Our Homeland, U.S. Department of Homeland Security Strategic Plan*. Washington, D.C.: U.S. Department of Homeland Security: 2004.

U.S. Department of Homeland Security Web Site. *Research and Technology Fact Sheet*. Available from <<http://www.dhs.gov/dhspublic/display?theme=27&content=3856>>. Internet. Accessed 20 November 2004.

U.S. Executive Office of the President. *National Strategy for Combating Terrorism*. Washington, D.C.: The White House, February 2003.

U.S. Executive Office of the President. *The National Security Strategy of the United States of America*. Washington, D.C.: The White House, September 2002.

U.S. General Accounting Office. *North American Free Trade Agreement, Coordinated Operational Plan Needed to Ensure Mexican Trucks' Compliance with U.S. Standards*, December 2001. Available from <[http://ntl.bts.gov/card\\_view.cfm?docid=12039](http://ntl.bts.gov/card_view.cfm?docid=12039)>. Internet. Accessed 17 September 2004.

U.S. Office of Homeland Security. *National Strategy for Homeland Security*. Washington, D.C.: Office of Homeland Security, July 2002.